May 2002

GUIDELINES FOR THE PROGRAM PROJECT GRANT OF THE NATIONAL CANCER INSTITUTE

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FOREWORD

It is a pleasure to provide you with these revised Program Project Guidelines of the National Cancer Institute. These Guidelines are effective immediately for all program project (P01) applications. Program Projects constitute one of the major extramural research mechanisms supported by the National Cancer Institute (NCI). The NCI has found the P01 grant mechanism to be a particularly effective and highly productive grant instrument, especially in areas where interdisciplinary collaboration and specialized core resources are needed to achieve a larger objective than can be supported through the traditional single project R01 grant.

Submitting and reviewing a competitive P01 requires a substantial investment of effort by applicants, applicant organizations, NCI staff, and peer reviewers. To maximize the potential of this effort, prospective applicants are strongly encouraged to discuss their ideas with relevant NCI program staff prior to the submission of a formal application. Individuals not certain which staff may be appropriate should telephone the NCI Referral Officer in the Division of Extramural Activities (DEA), NCI, at 301-496-3428 (or E-mail: ncidearefof-r@mail.nih.gov) for assistance. Please note the requirement that applicants must obtain approval from the NCI at least six weeks prior to the anticipated submission of all P01 grant applications (including amended applications) requesting $500,000 or more in direct costs in any one year (NIH Guide to Grants and Contracts, dated October 16, 2001 [http://grants.nih.gov/grants/guide/notice-files/NOT-OD-02-004.html]). In addition, budget requests for direct costs for Type 2 P01 grant applications must not exceed an increase of 20 percent over the direct costs to be awarded in the last non-competing (Type 5) year (see http://deainfo.nci.nih.gov/flash/NCIPolicy_p01_escalation.htm). To determine the base for calculation of the maximal allowed increase in the first continuation year, the principal investigator is encouraged to contact appropriate NCI program staff for assistance. Finally, all P01 applications, including new, amended, supplemental and competing renewal applications, must be submitted on or before the receipt dates February 1, June 1 or October 1.

When a P01 application is submitted to the NIH, it will be received by the NIH Center for Scientific Review (CSR), and referred to DEA, NCI for review. Each applicant will be contacted by an NCI Scientific Review Administrator, who will then be responsible for all phases of communication while the application is under review. After the scientific peer review is complete, the NCI Program Director assigned to the application again becomes the point of contact for questions and inquiries.

It is a requirement that P01 applications be prepared according to the instructions contained in this document, which provides updated information required for use with the Application for a Public Health Service Grant, PHS 398 (Rev. 5/01), as well as the latest changes in policies governing the submission, review and award of P01s (see http://grants.nih.gov/grants/funding/phs398/phs398.html). Applications must be on the 5/01 version of the PHS 398 forms. Applications not using this version of the application kit or not adhering to the instructions for preparation contained in this document may be returned without review.

Of special note for applications involving clinical research is the NIH requirement for addressing the protection of human subjects from research risk; the inclusion of women, minorities and children in the study populations; and the plan for data and safety monitoring (for research involving clinical trials). Expected accruals must be presented in tabular form for each clinical study proposed. Applicants should refer to the information in this document and the PHS 398 instructions. Failure to provide such information will result in the application being returned as non-responsive, or deferral of review until adequate information is provided.

Please note that in keeping with the focus of NIH on five explicit review criteria, both the overall P01 and the individual research projects will be evaluated for Significance, Approach, Innovation, Investigators and Environment. In evaluating Environment for each project, reviewers will consider

the project in the context of the overall P01. Reviewers will address these criteria specifically. A detailed discussion of these review criteria can be found in the NIH Guide, Vol. 26, Num. 22, June 27, 1997 (http://grants1.nih.gov/grants/guide/notice-files/not97-010.html).

Individual projects in a P01 are scored using a two-digit numerical rating from 1.0 to 5.0, based on an assessment of where the project ranks in the general field of research that the project addresses. Cores are rated as "Superior," "Satisfactory" or "Not Recommended for Further Consideration" without numerical scores. This practice is designed to assist the P01 parent Scientific Review Group in a more consistent and accurate evaluation of the overall merit of the P01. It is the view of the NCI that the P01 should be a cohesive, synergistic research effort focused on a central theme. Consequently, criteria related to the review of the program as an integrated effort are brought together in one section for more explicit documentation. The overall cohesiveness of the program will be rated as either "Highly Integrated," "Integrated" or "Not Integrated." For Type 2 applications, the reviewers will also specifically evaluate progress in the current funding period, both for the overall program and for each continuing project.

Peer reviewers will consider all of the above elements in assigning a single numerical score for the overall P01. Reviewers also will consider the likelihood that the proposed research will have a substantial impact on the scientific field under study. Since a single priority score is assigned to the program as a whole, applicants should keep in mind that inclusion of projects of lower quality or having only peripheral relationship to the central theme will have a negative impact on the overall evaluation. It is recommended, therefore, that applications include no more than six projects. Research programs requiring a larger number of projects should be considered for submission as separate P01 applications.

The NIH continues to evolve policies governing all extramural awards, including program projects. You are strongly encouraged, therefore, to make certain that you obtain the latest policy and procedure information as you begin to prepare a new or renewal P01 application. Updated information and additional copies of the P01 Guidelines may be obtained over the Internet by accessing the Home Page of the National Cancer Institute Division of Extramural Activities at: http://deainfo.nci.nih.gov/awards/P01.htm. Further information and guidance may also be obtained from the NCI Referral Officer (see contact information below), or for current grantees, from your NCI Program Director.

Referral Officer
Division of Extramural Activities
National Cancer Institute
6116 Executive Blvd., Room 8041
BETHESDA, MD 20892-8329
Rockville, MD 20852 (for courier delivery)
301-496-3428
301-402-0275 (FAX)
ncidearefof_r@mail.nih.gov

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Marvin R. Kalt, Ph.D.
Director, DEA

ALL P01 applications, including new, amended, supplemental, and competing renewal applications, must be submitted on or before the receipt dates of February 1, June 1 or October 1.

GUIDELINES FOR THE PROGRAM PROJECT GRANT OF THE NATIONAL CANCER INSTITUTE

I. INTRODUCTION

The Program Project (P01) grant is a mechanism for the support of an integrated, multiproject research program involving a number of independent investigators who share knowledge and common resources. This type of grant has a well-defined central research focus involving several disciplines or several aspects of one discipline. The individual projects are interrelated and synergistic; hence, they result in a greater contribution to program goals than if each project were pursued separately.

These Guidelines provide:

Definitions, background and review criteria for National Cancer Institute (NCI) P01 grants.

Instructions for the preparation of new, competing renewal, supplemental, amended and accelerated peer review (APR) P01 grant applications.

A description of the peer review process used for the evaluation of P01 grant applications.

II. DEFINITIONS and IMPORTANT URLs for GRANT POLICIES

Accelerated Peer Review (APR) - A mechanism for accelerated re-review of P01 applications that are rated as highly meritorious, but fall outside the IC's P01 payline.

Awaiting Receipt of Application (ARA) - An internal NIH document submitted to CSR by NCI staff to indicate willingness to accept an application (a) requesting $500,000 or more in direct costs in any year, or (b) for programmatic relevance.

Core - A separately budgeted component of the P01 that provides essential facilities or services to two or more of the proposed research projects.

Draft Review Report - A preliminary compilation of reviewer critiques used by Scientific Review Groups to guide final discussion and assignment of overall priority scores to applications.

Grants Management Specialist - The NCI official who serves as the focal point for all business-related activities associated with the negotiation, award and administration of grants.

Letter of Intent - A non-binding notification submitted to NCI staff by a principal investigator indicating intent to submit an application.

National Cancer Advisory Board (NCAB) - A Presidentially appointed chartered advisory committee to the Secretary, DHHS and the Director, NCI, composed of both scientists and

lay members, which performs the final advisory review of grant applications and advises on matters of significance to the policies, missions and goals of the NCI. The members include outstanding authorities knowledgeable in relevant programmatic areas who are especially concerned with the health needs of the American people.

National Cancer Institute Initial Review Group (NCI IRG) - a chartered advisory group composed primarily of non-Federal scientific experts who conduct the scientific and technical merit review (initial peer review) of grant applications and assign priority scores to meritorious applications. This large review committee is divided into a number of subcommittees or Scientific Review Groups (SRGs) which are analogous to study sections used throughout the NIH peer review system.

P01 - The NIH activity code that identifies a Program Project application or grant.

Principal Investigator - The one person designated by, and responsible to, the applicant/awardee institution for the scientific and administrative direction and proper conduct of all aspects of the P01.

Program Director - The NCI scientist administrator responsible for the development of initiatives and for the scientific management of research programs sponsored by the NCI. This person serves as the focal point for all science-related activities associated with the negotiation, award and administration of grants.

Program Project Grant (P01) - An assistance award for the support of a broadly based multidisciplinary research program that has a well-defined central research focus or objective. It may also include support for common supporting resources (cores) required for the conduct of the component research projects. Interrelationships between component projects are expected to result in a greater contribution to the program goals than if each project were pursued separately.

Project - A research component of the P01 application with a separate detailed budget.

Project Leader/Core Director - The investigator responsible for the scientific direction and conduct of an individual research project or core component of a P01.

R01 - The NIH activity code that identifies an individual, investigator-initiated research project application or grant.

Review Panel - An advisory group of scientific experts typically including representatives of an SRG subcommittee plus ad hoc members. These review panels perform the initial technical review of P01 applications and provide comments in the form of a Draft Review Report to the chartered SRG.

Scientific Review Administrator (SRA) - The NCI scientist administrator responsible for the organization, management and documentation of the initial review process for applications.

Scientific Review Groups (SRGs) are subdivisions of the larger Initial Review Group, analogous to study sections used throughout the NIH peer review system. Currently, Subcommittees C (Basic and Preclinical), D (Clinical Studies) and E (Cancer Epidemiology, Prevention and Control) are responsible for review of P01 grant applications for NCI (see http://deainfo.nci.nih.gov/Advisory/irg/sub-cmte/index.htm).

Special Emphasis Panel (SEP) - An advisory group of scientific experts drawn from a large pool of reviewers and chartered for the specific review or collection of reviews by a blanket chartering mechanism. The SEP is a second type of IRG.

Summary Statement - The official record of the evaluation and recommendations of the IRG.

Work Group - A review panel which reports to a parent committee. Work groups are commonly used to review multi-component applications such as P01s. The report from this review, a draft review report, is provided to the SRG where the final merit scoring is made. A work group may also be referred to as a review panel.

Important URLs for Grants Policy

http://cancer.gov/ (NCI Web Site)
http://deainfo.nci.nih.gov/funding.htm (Extramural Funding Opportunities)
http://deainfo.nci.nih.gov/extra/notices/index.htm (NCI Notices related to Initiatives)
http://grants.nih.gov/grants/peer/peer.htm (OER: Peer Review Policy and Issues)
http://grants.nih.gov/funding/phs398/phs398.html (PHS 398 Form and Instructions)
http://grants.nih.gov/grants/peer/hs_review_inst.pdf (NIH Instructions to Reviewers for Evaluating Research Involving Human Subjects)

III. BACKGROUND

The P01 grant is intended solely for the support of multidisciplinary or multifaceted research programs which have a strong central theme. This unique grant mechanism builds on the leadership of the principal investigator and on the interaction of the participating investigators to integrate the individual projects in a way that accelerates the acquisition of knowledge beyond that expected from the same projects conducted separately, without combined leadership or a common theme. Individual investigators apply their specialized research capabilities to basic research projects, clinical research projects, cancer control research projects or combinations of such projects as they relate to the focused, central theme of the overall P01. The P01 grant offers a special way to achieve an economy of effort through the sharing of personnel, facilities, equipment, data, ideas and concepts.

There are several features that distinguish P01 grants from other assistance mechanisms. Each project within a P01 is similar to the traditional research grant application in the sense that each is reviewed for scientific merit. However, a component project also is evaluated within the context of the special collaborative interrelationships and environment required for a P01. A P01 grant may contain one or more core component(s), each with a separate budget, for administrative or research support services that are required for and shared solely within a particular P01. Core components should be important to the overall success of the program, and each core must serve at least two projects. Cores which do not meet these minimum requirements will be rated “Not Recommended For Further Consideration (NRFC).” In addition, any components rated NRFC are considered in the peer review evaluation of the principal investigator's scientific judgment and program administration skills.

A P01 should include a sufficient number of scientifically meritorious projects to promote an effective collaborative effort among the participating investigators. To be eligible for an award, a P01 must consist of a minimum of three scientifically meritorious projects. However, the P01 should not be so large that it exceeds the scientific and administrative

leadership capability of the principal investigator, or that it loses a tight focus. Applicants should realize that the larger the program, the greater the likelihood that some components will be of lower quality. The inclusion of projects of lower quality or having only peripheral relationships to the central theme will have a negative impact on the overall evaluation. The maximum number of research projects recommended, therefore, is six. Investigators considering research programs with a larger number of projects should consider submission of separate P01 applications. Plans to submit applications with more than six projects should be discussed with the appropriate NCI Program Director. Please note that division of projects into subprojects in order to designate additional key investigators or to fragment the experimental approach is not permitted, nor are applicants permitted to incorporate projects or core components in the application for which no funds are requested. However, intramural NCI projects are allowed to be submitted with no requested budget. Reference may be made to existing or planned projects/activities to emphasize institutional resources and support. There is no allowance for unspecified developmental research funds (seed money) in P01 grants.

The principal investigator of the P01 should be an established scientist with a strong record of accomplishment who is substantially committed to, and exercises the responsibility for the scientific leadership, integration and administration of the entire P01. The principal investigator need not serve as a Project Leader or Core Director. The component projects should be directed by investigators who are experienced in the conduct of independent research and whose backgrounds and interests relate sufficiently to one another to allow for integrated group pursuit of the proposed P01 goals and objectives.

IV. REVIEW CRITERIA

Peer review emphasizes a synthesis of two major aspects of the P01 application: (1) review of the program as an integrated research effort focused on a central theme and (2) review of the merit of individual research projects and core components in the context and environment of the proposed program. In arriving at an overall merit priority score for the P01, reviewers also will consider the likelihood that the proposed research will have a substantial impact on the scientific field.

The review criteria for both the overall program and the individual projects are "Significance," "Approach," "Innovation," "Investigators," and "Environment" (NIH Guide, Vol. 26, Num. 22, June 27, 1997 [http://grants1.nih.gov/grants/guide/notice-files/not97-010.html]). The sections below give more detail about how these five criteria are applied to the overall program and the individual projects.

A. Review Criteria for the Overall Program

Significance: The significance of the program overall and its potential to advance scientific knowledge in the field.

Approach: The adequacy and quality of the experimental approaches proposed in the projects and the overall design of the P01.

Innovation: The degree to which the overall program applies novel concepts and innovative approaches.

Investigators: The qualifications of the principal investigator and the program leadership.

Environment: Scientific, organizational and administrative environment.

B. Program Leadership

The leadership of the principal investigator is assessed according to the following criteria:

1. The ability and qualifications of the principal investigator to effectively provide scientific and administrative leadership, as demonstrated by selection of individual projects for scientific excellence and thematic relatedness and by promotion of effective interactions and collaborations. Components not recommended for further consideration impact negatively on the evaluation of the program leadership skills and scientific judgment of the principal investigator.

   The adequacy of the commitment (percent effort) of the principal investigator to the P01. There should be a specific commitment to both the scientific and administrative aspects of the P01. Though a common practice, it is not mandatory that the principal investigator be a project leader of an individual research project.

C. Program as an Integrated Effort

The program as an integrated effort is assessed by considering the following criteria:

Evidence of coordination, interrelationships and synergy among the meritorious research projects and core components as related to the common theme of the P01.

The advantages or value added that could be realized by conducting the proposed research as a P01 rather than through separate research efforts.

The presence and quality of mechanisms for regular communication and coordination among investigators.

The mechanisms for quality control of the research (e.g., internal or external advisory committees).

For competing renewals, evidence of productive collaborations, such as joint publications, that have resulted from the P01 award.

D. Review Criteria for Projects

Significance: Does this study address an important problem? If the aims of the application are achieved, how will scientific knowledge be advanced? What will be the effect of these studies on the concepts or methods that drive this field?

Approach: Are the conceptual framework, design, methods, and analyses adequately developed, well-integrated, and appropriate to the aims of the project? Does the applicant acknowledge potential problem areas and consider alternative tactics?

Innovation: Does the project employ novel concepts, approaches or methods? Are the aims original and innovative? Does the project challenge existing paradigms or develop new methodologies or technologies?

Investigators: Is the project leader appropriately trained and well suited to carry out this work? Is the work proposed appropriate to the experience level of the project leader and other researchers (if any)?

Environment: Does the scientific environment in which the work will be done contribute to the probability of success? Do the proposed experiments take advantage of unique features of the scientific environment or employ useful collaborative arrangements? Is there evidence of institutional support?

(NOTE: Synergy and thematic relatedness between the projects and cores, and the significance of the project for the program as a whole, will be evaluated under "Program as an Integrated Effort" and/or in the "Overall Critique" sections.)

E. Additional Review Criteria for Projects involving Human Subjects

For P01s that involve human subjects, reviewers will examine (a) whether the applicant has adequately addressed the protection of human subjects, and (b) whether the involvement of minorities and children and the gender characteristics of the study population are scientifically acceptable and consistent with the aims of the project. Deficiencies in the application with respect to these issues will be considered in assessing merit of the research approach, and may impact on the recommended scientific merit rating of individual projects.

If human subjects are involved, applicants should consult the instructions in the PHS 398 package as well as the on-line "NIH Policy and Guidelines on Inclusion of Women and Minorities as Subjects in Clinical Research." (http://grants.nih.gov/grants/funding/phs398/section_1.html) (http://grants.nih.gov/grants/funding/women_min/women_min.htm).

For P01s that involve NIH-defined clinical research, investigators must report ethnic/racial enrollment in tabular form, as specified in the PHS 398 application. For those projects that involve clinical trials, investigators must include a general description of the Data and Safety Monitoring Plan in the application. (http://grants.nih.gov/grants/guide/notice-files/NOT-OD-00-038.html)

F. Review Criteria For Core(s)

The utility of the core to the P01. Each core must provide essential facilities or services for two or more projects judged to have substantial merit.

The quality of the facilities or services provided by this core (including procedures, techniques, and criteria for prioritization).

The qualifications, experience, and commitment of the personnel involved in this core.

The appropriateness of the budget, and accountability for distribution of costs to projects. A realistic budget reflects the core director's understanding of the scope of the work.

For an Administrative Core: The quality of administrative resources, the decision-making process for the allocation of resources and funds, and the plans for the evaluation of progress and future directions of the P01.

G. Additional Criteria for Competing Renewal Applications

The progress and achievements specific to this P01 since the previous competitive review.

Evidence that scientific synergy has occurred as indicated by joint publications and new collaborative aims and/or projects.

Evidence that the previous specific aims have been accomplished and that the new research goals are logical extensions.

The previous performance and cost-effectiveness of the core(s).

The justification for adding new projects or cores or deleting components previously supported.

H. Additional Criterion for Amended Applications

The progress, changes, and responses to the critique in the summary statement from the previous review, indicating whether the application is improved, the same as, or worse than the previous submission. Note that under current NIH policy, an application may only be amended twice.

V. COMMUNICATIONS with NCI STAFF

A. Letter of Intent

Applicants must obtain approval from the NCI at least 6 weeks prior to the anticipated submission of all P01 grant applications, including amended applications, requesting $500,000 or more in direct costs in any one year (NIH Guide to Grants and Contracts, dated October 16, 2001 [http://grants.nih.gov/grants/guide/notice-files/NOT-OD-02-004.html]). An informative Letter of Intent, as described below, will assist NCI staff in preparing the ARA, the NIH internal document required for such approval, in a timely manner. An application requesting $500,000 or more in direct costs that is received without indication of prior staff concurrence and identification of program staff contacted will be returned to the applicant without review.

Although the Letter of Intent is not binding, the information provided also allows NCI review staff to estimate the potential review workload and to avoid conflict of interest in the review.

The Letter of Intent should include as a minimum:

1. The names of the principal investigator and principal collaborators.

2. A descriptive title of the potential application and a list of titles for the anticipated components of the P01.

3. Identification of the organization(s) involved.

4. Announcement (if any) to which the potential application is responsive.

Letters of Intent should be sent to:

Referral Officer
Division of Extramural Activities
National Cancer Institute
6116 Executive Blvd., Room 8041
BETHESDA, MD 20892-8329
Rockville, MD 20852 (for courier delivery)
301-496-3428
301-402-0275 7(FAX)
ncidearefof_r@mail.nih.gov

The Referral Office sends a copy to the Chief, Research Programs Review Branch and to the appropriate NCI program director. If you have previously been in communication with an NCI program director, please provide their name in the letter and forward them a copy of the letter.

B. Additional Communications with NCI Staff

Potential applicants have found it useful to establish additional communications with relevant NCI staff prior to submission of an application. Communications should begin at least three months prior to submission. Applicants may request to meet in advance with program and review staff.

Specific issues which might be discussed include:

The theme or focus of the P01.

The size and scope of the program and the optimal number of projects.

The rationale for choosing the P01 mechanism for support of the planned research.

For each project within the program, the tentative title, name of the project leader, and a brief summary of goals and relationship to the central theme.

A brief description of the core component(s) and how each one supports the overall program.

The estimated budget for the program. NOTE: If the budget for the competitive renewal application exceeds 20 percent of the last budget period, the application may be returned if NCI approval has not been obtained and documented.

The methods to be used to stimulate communication and interaction among program participants.

Other related support.

For competing renewal applications, an identification of components to be discontinued and new components that might be added to the P01.

VI. SPECIAL INSTRUCTIONS for PREPARATION of PROGRAM PROJECT APPLICATIONS

General instructions for the preparation of the P01 grant application are contained in the Grant Application Form PHS 398 (Revised 05/01). Please note that the instructions provided in the PHS 398 document are designed primarily for traditional research project (R0l) applications. P01 applications require additional information as outlined below. Clear and concise organization of the application is essential (i.e., a table of contents, headings, sub-headings, limited repetition rather than extensive referencing to other areas of the application, clearly readable type, etc.). Such features promote the efficient study and review of the application. Page limitations are presented in the PHS 398 instructions; these should be followed closely for each individual project and core unless otherwise noted.

When submitting the application, please attach a cover letter that includes the following information: response to a Program Announcement or RFA (if applicable), the name of the NCI program director, and the institute (NCI) which has agreed to accept the application (see NIH Policy).

A. Face Page (PHS 398 Form Page 1; Instructions for PHS 398, Section I-C1). Type "PROGRAM PROJECT" in the top left-hand corner of the face page immediately above the words "GRANT APPLICATION." Complete all items on the face page of the application as in a traditional research grant application. This is page 1 of the application; all succeeding pages should be numbered consecutively.

B. Description, Performance Sites and Key Personnel (PHS 398 Form Page 2 and Continuation Pages; Instructions for PHS 398, Section I-C2)

State concisely the overall goals of the entire P01 and clearly state the contribution of each component to the overall theme and goals. Under Performance Sites, list the applicant institution and all other sites where work described in the research plan will be conducted. Key personnel for the entire P01, including consultants and consortium collaborators, if any, should be listed alphabetically. To aid in the review of the application, include information concerning the distribution of effort of key personnel on each project and core. This could be presented in a tabular form such as that shown in Appendix B: Sample Table of Distribution of Professional Effort, NCI P01 Guidelines.

C. Table of Contents (PHS 398 Research Grant Table of Contents Form Page 3; Instructions for PHS 398, Section I-C3)

The application is reviewed as a whole as well as project by project; therefore, prepare a detailed table of contents that enables reviewers to find specific information readily. Identify projects by number, title and responsible investigator. Identify cores by letter, title and responsible investigator. A sample Table of Contents is included at the end of these Guidelines as an example of how the order and format of the application could be organized (see Appendix A, NCI P01 Guidelines). In the event an existing project or core is discontinued or deleted, all projects and cores should be renumbered in sequence.

D. Detailed Budget for Program Project Initial Budget Period (PHS 398 Form Page 4; Instructions for PHS 398, Section 1-C4)

The PHS 398 Instructions should be followed closely in preparing the total P01 budget. Budgetary information is also required for each component project and core. Specify and justify personnel effort for each participating investigator even if no salary support is requested.

Present a detailed composite budget for all requested support for the first year, using page 4 of the PHS 398 application form. If collaborative efforts or "purchased services" involving other institutions or organizations are anticipated, itemize all costs associated with such third-party participation, including any applicable indirect costs, on a separate budget page and enter the total under the "Consortium/ Contracted Costs" direct costs budget category. For details, refer to "Consortium Agreements," available on the Web at http://grants2.nih.gov/grants/policy/nihgps/part_iii_5.htm#Consortium.

Budget requests for direct costs for Type 2 P01 grant applications must not exceed an increase of 20 percent over the direct costs to be awarded in the last non-competing (Type 5) year. The Notice of Grant Award for the last grant period (Type 5) now includes an estimate of the budget cap allowed for the competing renewal application. The principal investigator is encouraged to contact NCI program staff for assistance in preparing budgets. (http://deainfo.nci.nih.gov/flash/NCIPolicy_p01_escalation.htm).

E. Budget for Entire Proposed Program Project Period (PHS 398 Form Page 5; Instructions for PHS 398, Section I-C5)

Present a composite summary budget for all years of requested support for the overall P01 by category, i.e., personnel, equipment, supplies, etc. Pay particular attention to the specific instructions for justifying budget requests as NIH cost containment policies encourage the deletion of unreasonable or unjustified expenditures. All increases for future years, whether standard cost of living or projected special requirements, should be stated explicitly and clearly justified.

F. Biographical Sketch and Other Research Support Information (PHS 398 Format Page; Instructions for PHS 398, Section I-C6)

Follow the instructions on the “Biographical Sketch Format Page.” Biographical sketches are required for all KEY personnel participating in individual projects and cores and for all consultants. In arranging the biographical sketches, the principal investigator should be listed first, with other key personnel in alphabetical order. Each sketch may not exceed four pages. Items A (Positions and Honors) and Item B (Selected Publications) may not exceed two of the four-page limit.

Information on other support beyond that required in the biographical sketch should not be submitted with the application. Specifically, do not list award amounts or percent effort in projects, nor address potential scientific and/or budgetary overlap.

It is the policy of the NCI that meritorious projects reviewed as part of the P01 be funded as part of the P01 even though other funding (e.g., in the form of an R01 grant) may be available.

G. Program Narrative: Overall Program Project (PHS 398 Continuation Pages)

The narrative for the P01 should explicitly provide the required information in the order noted below. Efforts should be made to keep the narrative as concise as possible. Typically, eight to twelve pages are sufficient.

1. Goals and Significance: Present the general problem area to be studied, the overall long-term objectives of the research described in this application, and any hypotheses to be tested. In addition, the overall significance of the research effort should be described.

2. Theme: A P01 is a confederation of interrelated research projects. It is important to establish the programmatic theme in this section and to address the issue of the integration of components, demonstrating how each individual component benefits from and contributes to the overall P01. A diagram illustrating the interactions between components may be helpful to reviewers.

3. Research Plan: This section delineates the research addressed by the program as a whole and explains the strategic approach to the problem, briefly mentioning each project as it relates to the overall P01. Descriptions of prior collaborative efforts among investigators in the group, as well as the sequence of events leading to the current application, may also be included in this section. It is important to discuss the advantages expected from a group effort, e.g., how the projects are mutually reinforcing, how collectively they further the goals of the proposed research, etc.

4. Preliminary Studies (for new applications): This section should focus on research already underway and current accomplishments of the investigators. More detailed preliminary reports are included separately under each individual project. Items to be included are:

   A summary of major accomplishments attributed to the participating investigators that relate to the overall theme of the P01.

   A list of all publications and manuscripts accepted for publication already produced by the interaction(s) of the participating investigators.

5. Progress Report (for competing renewal applications): This section should describe achievements in the current funding period. Separate progress reports are included in the individual research projects, so the information in the program narrative should focus on the overall P01 rather than reiterating information provided in each component. Items to be included are:

   A summary of major accomplishments that can be attributed to the P01 grant. Accomplishments involving more than one project leader should be noted.

   A list of all publications and completed manuscripts that have resulted from the P01 grant. With an asterisk, denote each publication that is a result of formal collaborations among different projects within the program.

   A list of projects and core components in tabular form (by title, investigator and previous number/letter) that denotes which projects have been discontinued or completed since the last review. Also include projects that are continuing, are new, or are substantially modified. Explain the decision to discontinue, substantially modify, or start new projects.

6. Institutional Environment and Resources: Briefly describe the institutional environment and resources that are relevant to effective implementation of the P01. This may include statements about clinical and laboratory facilities,

participating and affiliated units, patient population, geographic distribution of space and personnel, and consultative resources.

7. Organization and Administrative Structure: Several kinds of information are required in this section:

   Describe in detail, and by diagram, the chain of authority for decision making and administration, beginning at the level of principal investigator. Include investigators responsible for individual components (project leaders) and how the projects are planned, coordinated, and evaluated. If internal or external advisory groups are to be used, list the membership and describe the role of each.

   List in a separate table all consultants, and their institutional affiliations, both paid and unpaid.

   Describe relationships between the P01 and other research, academic, and administrative units of the institution (such as centers, institutes, departments) and the central administration.

8. Literature cited: List complete literature citations at the end of the program narrative. Each should include names of all authors, full title, name of book or journal, volume, pages and year of publication.

H. Individual Research Projects (Research Plan, Instructions for PHS 398, Section I-C8)

Describe each project **in sufficient detail to enable reviewers to judge the scientific merit from the written application**. This is especially important since the review is based solely on the written application when a site visit is not considered necessary. Be explicit enough to enable experts in other areas to follow the main objective of the project. All projects are to have a single theme, project leader and budget. Separately numbered subprojects (i.e., such as Subprojects 3A and 3B) are not allowed.

1. Title Page (PHS 398 Continuation Page). Clearly denote the project number, the title of the project, the project leader, and educational degrees.

2. Description/List of Key Personnel (PHS 398 Form Page 2). The title of "Principal Investigator" is reserved for the director of the overall application. The directors of individual projects should be referred to as "project leaders" and directors of cores should be referred to as "core directors."

3. Omit the PHS 398 Table of Contents form.

4. Detailed Budget (PHS 398 Form Pages 4 and 5; Instructions for PHS 398). A detailed budget is required for the first year and the budget summary for each additional year. The budget justifications are to be explicit, including those for any increases or changes for future years.

5. Omit Biographical Sketches and Other Support because these are included elsewhere in the application.

6. Resources (PHS 398 Format Page). Follow the instructions on the PHS 398 Resources Format Page. List only those resources specific to the individual project or core.

7. Research Plan: (PHS 398 Continuation Pages; Instructions for PHS 398, Section I-C8).

   Project Narrative - **Include Sections a-d** (Instructions for PHS 398, Section I-C8). Limited to 25 pages.

   The relevance of the project to the primary theme of the program and the collaborations with investigators within the P01 is broadly addressed in the overall program narrative (see Item G). However, these aspects should be delineated in greater detail at the end of the individual project narratives.

8. Human Subjects Research (PHS 398 Continuation Pages; Instructions for PHS 398, Section I-C8, Item e).

   For P01s that involve human subjects, applicants must address (a) the protection of human subjects from research risk, (b) the inclusion of women, minorities and children in the study population, and (c) the plan for data and safety monitoring (for projects involving any type of clinical trials), in accordance with information provided in the "NIH Instructions to Reviewers For Evaluating Research Involving Human Subjects in Grant and Cooperative Agreement Applications" (see http://grants.nih.gov/grants/peer/hs_review_inst.pdf). Deficiencies in the application with respect to these issues will be considered in evaluating the research approach, and may impact on the recommended scientific merit rating of individual projects.

   For P01s that involve NIH-defined clinical research, investigators must report ethnic/racial enrollment in tabular form, as specified in the PHS 398 application. For those projects that involve clinical trials, investigators must include a general description of the Data and Safety Monitoring Plan in the application.

9. Vertebrate Animals (PHS 398 Continuation Pages; Instructions for PHS 398, Section I- C8, Item f). Self-explanatory.

   NIH policy requires the submission of Institutional Animal Care and Use Committee (IACUC) approval when animal studies are involved. The certification must be submitted with the application or within 60 days after the application receipt date. Otherwise, the application will be considered incomplete and deferred to the next review cycle.

10. Literature Cited (PHS 398 Continuation Pages; Instructions for PHS 398, Item g). List <u>complete</u> literature citations at the end of each project. Each citation must include the names of <u>all</u> authors, <u>full</u> <u>title</u>, name of book or journal, volume, pages and year of publication.

11. Consortium/Contractual Arrangements (PHS 398 Continuation Pages; Instructions for PHS 398, Item h). Self-explanatory.

12. Consultants (PHS 398 Continuation Pages; Instructions for PHS 398, Item i). List consultants specific to this project but external to the P01. For each consultant, include a letter of support detailing the nature and extent of participation.

13. Do <u>not</u> include a checklist for each project.

14. If a Personnel Report is submitted with a competing continuation application, all Personnel Report Forms for each component should be identified by project/core and grouped at the end of the application.

15. Appendix **(Procedures differ from PHS 398 Instructions)**

Do not include appendix materials with the application. The SRA for the review will request the appropriate number of **collated sets** of appendix materials in his/her initial discussion with the applicant. These are to be sent at that time directly to the SRA. An exception is for P01s submitted in response to an RFA. In this instance, the appendix material should be submitted with the application.

Appendices should be clearly identified by project number and investigator, and may consist of the following materials:

a. Sets of supplementary graphs, diagrams, tables, photographs and charts directly pertinent to the application. Keep such material to a minimum; if it is essential to an evaluation of a project or of the application, incorporate it in the application. The appendix is not to be used to circumvent the page limitations in the application. Normally only the assigned reviewers for a project receive the appendix material for the project.

b. Publications and manuscripts accepted for publication. No more than 10 publications and/or manuscripts may be submitted for each project. As stated in the 5/01 PHS 398 instructions, pre-prints of manuscripts in preparation are not allowed.

Appendix materials must be received in time to distribute to reviewers for consideration. Appendix materials submitted later than the date specified by the Scientific Review Administrator may not be distributed to the review group.

I. Cores (PHS 398 Continuation Pages; Instructions for PHS 398)

The cores of a P01 may include laboratory and clinical facilities, equipment, and services which will be shared by multiple projects of the P01. A core may also include support for administration, such as the costs of fiscal and business management, consultant, secretarial and clinical services associated with the P01 unless these items are included in the institution's indirect cost rate.

1. Using a Form PHS 398 Continuation Page, denote "Core Component" and the core director's name and educational degree(s). If there is to be more than one core component, prepare a separate section for each core (i.e., Core A, Core B, etc.).

2. For each core component, follow the specific instructions for the individual Research Project, Section VI. In place of Item H. 7., Research Plan, describe the role of the core component as a resource to the P01 as a whole. The core service plan should include a description of the services to be provided and the background and significance for the inclusion of the core. The applicant should present a clear description of methods and services to be provided and (if appropriate) discussion of human subjects protection and inclusion, as well as a data safety monitoring plan/board. Cores may contain a non-hypothesis driven

research activity, provided that the research is designed to improve core services. For competing renewal applications, a progress report/summary of services in the current funding period should be provided. This may include reference to publications from the completed research effort. Clearly present the facilities, resources, and professional skills that the core component provides.

For Administrative Cores (if included in the P01), the services to be provided may encompass such functions as fiscal management, clerical support, manuscript preparation, meeting organization, data management, and quality control and planning/evaluation. The latter may include plans to establish internal and/or external advisory committees. **If an Administrative Core is not part of the P01, these issues must be discussed under "Organization and Administrative Structure" in the Program Narrative (see Section VI, G.7 of these Guidelines).** In particular, the principal investigator should include a discussion of the decision-making processes involved in the program and the planned mechanisms for promoting communication and collaboration among program investigators.

3. To aid in the review, it is suggested that a table, to show the estimated or actual proportional use of this core component by each project, be included in the application. (See Appendix C: Sample Table of Distribution of Core Resources) Justify this core component by discussing ways in which these centralized services improve quality control, produce an economy of effort, and/or save overall costs compared to their inclusion as part of each project in the program.

4. If this is a competing renewal application or request for supplemental funds, summarize core activities carried out during the preceding performance period. Site-visited applicants will be expected to document core activities use through log books or charge-back records.

J. Checklist for overall application (Use PHS 398 Checklist Form Page; Instructions for PHS 398). Self-explanatory.

VII. SPECIAL INSTRUCTIONS for COMPETING SUPPLEMENTAL APPLICATIONS

Competing supplements may only be requested for grants with at least two years of remaining support in the current award.

It is important to note that the supplemental application must have a well-founded basis, e.g., unforeseeable costs and/or pursuance of an unanticipated scientific opportunity. It should contain sufficient detail to permit an adequate evaluation of the requested expansion of the overall P01. A supplemental application will not be accepted if (a) it is to restore administrative cuts or (b) it does not fit within the scope of the existing P01 or extend the program's scope in a clear and logical manner. All the information requested in these Guidelines (Section VI) should be included in the application, but adjusted to the requirements of the supplement as follows:

A. A letter of intent or direct consultation with the program director of the original application may precede the submission of a competing supplement.

B. A supplemental application is not accepted before the original application receives an award.

C. The description of the proposed research should address the goal of the entire P01 in addition to a summary of the supplemental request.

D. Two sets of budgets are required for supplemental applications. The first should include funded levels of support for all years for each project and core within the ongoing P01. The second should present the budget request specific for the supplemental funds application. Keep the two budget presentations separate and clearly labeled.

E. If new key personnel are included specifically for the new studies, their names should be added to the Key Personnel section, and appropriate biosketches should be provided. Inclusion of biosketches for the key personnel associated with existing components is not necessary.

F. Program Introduction - Statement of Objectives. In addition to the information requested, describe the reasons for the urgent need for supplemental support.

G. Provide a summary report of progress made in the program since the last competitive review.

H. If the supplemental request is for one or more new projects or for an extension of time for ongoing projects, each project should be described in detail. The individual projects should be presented in the format described for projects in new/renewal applications. Particular emphasis should be placed on the relationship of each new project to the goals of the P01.

I. If the request is for expansion of projects and/or cores which were reviewed in the original application, a detailed description of each component for which supplemental funds are requested should be presented in the format previously described for new/renewal applications. The progress report for each project should include information describing events which led to the need for supplemental support.

VIII. SPECIAL INSTRUCTIONS for AMENDED APPLICATIONS

Prepare an amended application according to instructions provided in Section VI of these Guidelines. An amended application will be returned without review if substantive changes are not clearly apparent and identified.

A. Depending on the timing of the planned submission, discussions with the program director may take the place of the Letter of Intent. As previously stated, neither is mandatory, but past experience has indicated that interaction with NCI staff can be helpful to applicants. Nevertheless, NCI program staff will need to file an ARA if funds are requested in excess of $500,000 first year direct costs.

B. Acceptance of an amended application automatically withdraws the prior version.

C. Before the Research Plan for the overall P01, provide an Introduction which summarizes the additions, deletions and changes that have been made.

D. Preceding the Research Plan for each project and core, provide an Introduction which specifically delineates responses to the summary statement critique and summarizes changes made in the research plan.

E. Incorporate in the Progress Report/Preliminary Results a discussion of any work done since the previous review.

F. In both the overall and individual project Research Plans, amended portions or passages must be clearly identified to facilitate the review of the amended aspects of the application. The preferred method is to use a vertical line in the left margin to mark amended areas of the application. An easily differentiable font, such as italics, of size required in the PHS 398 form, also may be used.

IX. SPECIAL INSTRUCTIONS for PREPARATION of ACCELERATED PEER REVIEW (APR) APPLICATIONS

The National Cancer Institute (NCI) has established a procedure for the accelerated peer review (APR) of P01 applications that are rated as being highly meritorious, but still do not fall within the Institute's P01 payline. The intention is to decrease significantly the burden on applicants and to reduce the wait for re-review for possible NCI funding. To be eligible for the APR process, the concerns noted in the summary statement must be addressable in a concise and straightforward manner. Examples would include deletion of a weak project or core, minor changes in specific experiments or methods, addition of key preliminary data or expertise, or recent acquisition of an essential reagent. Inclusion of new projects/cores is not allowed. When considering deletion of major elements, note that the amended P01 must still include a minimum of three research projects.

Principal investigators of eligible applications will be notified by NCI program staff that they have the opportunity to submit an abbreviated response to the summary statement critique (as described below) in lieu of a full amended application so that it can be considered by the P01 SRG at its next scheduled meeting. The principal investigator must inform NCI review staff of the intent to submit an APR response in the time frame indicated by NCI program staff. If the previous review was conducted by a SEP, the review will be conducted by teleconference. In either case, the outcome of the review will be reported to the National Cancer Advisory Board at its next meeting.

Please note that the response submitted for APR consideration will count as one of the two amended application submissions currently allowed by the NIH, and the summary statement with the APR Note will be considered "Amended". The NCI APR procedure, therefore, is available for new and competing renewal applications and applications that have been amended once. (Applications that have been amended twice are no longer eligible for additional reviews under current NIH rules.)

It is expected that this procedure will save time for applicants in the preparation of their responses and in the time involved in the peer review process. The APR mechanism will reduce the amended application review cycle from eight to approximately four months. However, all applicants eligible for APR will still have the option to decline the accelerated review process and to amend fully their application in the usual way and resubmit in time for the next standard P01 application receipt date (February 1, June 1, or October 1).

1. Face Page (PHS 398 Form Page 1: Instructions for PHA 398, Section 1-C1).

   Type “PROGRAM PROJECT APR” in the top left-hand corner of the face page immediately above the words “GRANT APPLICATION.” Complete all items on the face page as in a traditional research grant application. This is page 1 of the APR document; all succeeding pages should be numbered consecutively.

2. Description, Performance Sites and Key Personnel (PHS 398 Form Page 2 and continuation pages; Instructions for PHS 398, Section 1-C2)

Page 2 from the previous application may be used, if it is still appropriate. If new key personnel are included as part of the application group, their names should be added to the Key Personnel section.

3. Detailed Budget for Program Project Initial Budget Period (PHS 398 Form Page 4; Instructions for PHS 398, Section 1-C4)
   Only the Detailed Composite Budget for all requested support for the first year, and the Summary Composite Budget for the total requested years should be submitted if there are no changes in the APR requested budget. If the requested budget has been modified in response to the previous summary statement, new summary budgets for the overall program and modified budgets for the particular affected projects/cores should be submitted.

4. Biographical Sketch and Other Research Support Information (PHS 398 Format Page; Instructions for PHS 398, Section 1-C6). Follow the instructions as given on the "Biographical Sketch Format Page."

   Submit Biographical Sketches only for new key personnel.

5. The text of the response is not to exceed 20 pages excluding revised budget pages and biographical sketches, if any. Human Subjects issues also should be addressed within the 20 page document.

   There is no specific format for the 20 page text. However, the document should have headings for each component of the application addressed in the APR response. It is anticipated that responses will be concentrated on those projects/cores or sections of the research plan needing the most revision. However, decisions about space allocation within the 20 page limit is vested with the applicant group.

6. Collated sets of appendix material, such as new data from key experiments or new publications and/or in press publications, may be submitted along with the original and five copies of the APR document. The number of sets should be discussed with the assigned SRA. A cover letter stating that the application is being submitted under the APR process should be included in the package.

7. DO NOT USE THE MAILING LABEL IN THE PHS 398 KIT. ALL COPIES OF THE APR DOCUMENT AND ALL APPENDIX MATERIAL MUST BE SENT DIRECTLY TO THE FOLLOWING ADDRESS BY THE DATE INDICATED BY THE SRA:

   Referral Officer
   Division of Extramural Activities
   National Cancer Institute
   6116 Executive Blvd., Room 8041
   BETHESDA, MD 20892-8329
   Rockville, MD 20852 (for courier delivery)
   301-496-3428
   301-402-0275 (FAX)
   ncidearefof_r@mail.nih.gov

X. APPLICATION SUBMISSION PROCESS (for all applications but APRs)

A. Receipt deadlines and review schedules for all P01 applications submitted to the NCI, including all new, competing renewal, amended, and supplemental applications, are presented in the table below. Incomplete applications will be deferred to the next review cycle or administratively withdrawn. All competing renewal applications

should be submitted in a timely fashion to avoid a possible gap in support for the program. Please note that the NCI Executive Committee has reaffirmed that applicants must submit competing continuation applications only on the originally scheduled submission date (ordinarily nine months prior to the end date of the award), in order to assure that applications are considered for funding with their proper cohort and to conserve NCI staff resources. Therefore, the Division of Extramural Activities will defer to the appropriate later round(s), the review of all renewal applications submitted prematurely.

Letter of Intent*	Receipt Date for Applications	Initial Review**	NCAB Review	Earliest Possible Start Date
Minimum of six weeks before receipt deadline	February 1	Mid April to Early June	September	December 1
	June 1	Mid August to Early October	February	April 1
	October 1	January to early March	May	July 1

*Letter of intent is encouraged, but not required.
**Requests For Applications announcements may prescribe different receipt and review dates.

B. Mail the **original** and **three copies** of the complete application to the NIH Center for Scientific Review (CSR) using the address label included in the application kit. DO NOT SEPARATELY BIND SECTIONS OF LARGE APPLICATIONS. This may cause problems with processing the application in the CSR. Applications must be sent by U.S. mail or commercial carrier. Hand-delivered packages will not be accepted by the CSR mail room.

C. In addition, **send two complete copies under separate cover to:**

Referral Officer
Division of Extramural Activities
National Cancer Institute
6116 Executive Blvd., Room 8041
BETHESDA, MD 20892-8329
Rockville, MD 20852 (for courier delivery)
301-496-3428
301-402-0275 (FAX)
ncidearefof_r@mail.nih.gov

It is to the advantage of the applicant to be certain that the Referral Office copies are submitted separately; this allows NCI staff to direct early attention to such issues as review scheduling and the need for additional information or materials required for peer review.

D. **Do NOT send appendix material with the application**. The SRA will request the appropriate number of sets directly from the applicant after assignment (see page 17).

E. For applications responsive to published Requests for Applications (RFAs), the RFA label available in the 5/01 revision of Application Form 398 must be affixed to the bottom of the face page. Failure to use this label could result in delayed processing of the application such that it may not reach the review committee in time for review.

XI. REVIEW PROCEDURES

A. Policies

The Scientific Review Administrator (SRA), as the NCI official responsible for managing the review, ensures that the review is conducted in accordance with NIH and NCI policies. As the manager of the review process, the SRA serves as the primary resource for the NCI SRG or SEP or work group/review panel with respect to NIH review policies, guidelines, rules, regulations, options available, and procedures. The SRA discusses review procedures and criteria, the need for a well-documented review and the functions of the NCI staff. The SRA also presents an explanation of conflicts of interest, implications of the Privacy Act, the need for confidentiality of the proceedings, the necessity of addressing gender, minority and children representation in clinical study populations, and other policy and logistic matters. The NCI program director serves as a resource, as needed, concerning the history and development of the program, changes in program direction and other relevant program matters.

The NCI is committed to the conduct of impartial, quality peer review of grant applications submitted by the scientific community and to the maintenance of an objective review process.

The Research Programs Review Branch, Division of Extramural Activities, is organizationally independent from the NCI extramural program units. The Research Programs Review Branch has responsibility for, and autonomy in, the conduct of initial review activities.

The conduct of peer review by a traditional Scientific Review Group (SRG) or Special Emphasis Panel (SEP) shall be in all particulars consistent with, and subject to, NIH and PHS peer review practices and policies.

Review staff are responsible for managing the scientific and technical review of P01 applications, including the selection of reviewers; management of SRGs, SRG-associated work groups/review panels, or SEPS; and the documentation of review panel findings and recommendations.

The responsibility for communications between the applicant and NCI staff changes during the various phases of the application process. Prior to submission of the application, NCI extramural program staff are the appropriate contact. Subsequent to submission and assignment of the application, and until initial peer review has been completed, all contacts should be made through the SRA. Following the initial peer review, program staff again become the focal point for communications with the applicant.

Every effort is made to avoid both the fact and appearance of conflict of interest in obtaining advice concerning P01 applications. In addition, the confidentiality of both the review materials and deliberations is maintained. Under no circumstances should there be direct contact between applicants and reviewers; instead, any questions or concerns should be brought to the attention of appropriate NCI staff as indicated above.

To maintain the integrity of the peer review process in its focus on scientific merit, current pay lines and funding policies are not discussed.

2. Amendments of the application in the interim between the review by the work group/review panel and scoring by the SRG are not allowed.

B. Application Receipt and Referral

Program project applications, like all other PHS grant applications, are received and initially processed by the NIH Center for Scientific Review (CSR). Following the current National Cancer Institute referral guidelines, the application is assigned to NCI and subsequently to a program area and to an SRA who manages the review. Applications which do not meet the referral guidelines for NCI programs are referred to another NIH institute.

C. Application Administrative Review

Upon receipt, the SRA reviews the application for conformance to NIH policies and NCI Guidelines and discusses concerns with NCI program staff. If the deficiencies can be resolved easily post-submission, then the principal investigator is notified and remedial action is taken. If the deficiencies are excessive or difficult to resolve quickly, the application will be returned to the applicant without further consideration.

D. Review Format

The success or failure of an application depends first and foremost on how well the written application conveys the intent, merit and impact of the proposed research. Thus, applications must be complete as submitted so that they can be reviewed without communication between the applicant and review groups.

For those applications assigned to a SRG, a review of technical merit by a SRG work group/review panel may precede the final review and assignment of merit priority score by the SRG. For applications reviewed by a SEP review panel, the review will encompass both technical merit and assignment of an overall program merit score by the same review panel.

The specific review format will depend largely on the content and complexity of the application. The review SRA will discuss the options with the Section and Branch Chiefs of the Research Programs Review Branch and with NCI program staff and make a decision as to the format most appropriate for the specific application. Members of the NCI SRG subcommittees responsible for P01 review may be consulted before the final decision is made. Several options are possible:

1. Site Visit - The review meeting may include an on-site visit to the applicant institution.

2. Telephone Conference - The review meeting may be conducted via teleconference and/or correspondent review.

3. Applicant Interview - The review meeting may be held at some site other than the applicant institution with or without participation by the applicant.

4. For some applications (e.g., competing supplemental applications and minimally amended applications), it may be sufficient and appropriate to use a review meeting conducted entirely by teleconference and/or mail, without participation by the applicants.

5. Applications that receive a highly favorable merit priority score but fail to obtain funds may be eligible for an Accelerated Peer Review (see Section IX). Under this option, applicants will be notified of their eligibility to submit a narrative response (up to 20 pages in length) to the previous review critique, in lieu of a fully amended application. The applicant's response will be reviewed by the SRG P01 review committee at its next meeting. This procedure is designed for applications requiring minimal amendment and will normally save the time of one review cycle. Generally, the APR response is reviewed by teleconference. (see the NIH Guide for Grants and Contracts [http://grants1.nih.gov/grants/guide/notice-files/not98-142.html])

Given year-to-year variations in workload, staffing, and operating budget levels, as well as periodic evaluations of review policies across the NIH, it is not possible to site visit all applications. At present, it is likely that competing new and renewal applications will continue to include an onsite interview as a part of the review process if the research is conducted at, or proximal to, a single institution. **Nevertheless, applications should be complete and must be prepared as if no site visit will be held**.

The site visit has the primary purpose to allow the applicant to respond to questions the reviewers may have about the application and to present data which were not available at the time the application was submitted. If a site visit is needed, the SRA calls the principal investigator, review panel chairperson and program director to establish a mutually acceptable date and time frame for the visit. An appropriate agenda for the applicant presentations also is discussed. The principal investigator should be as flexible as possible in providing dates to accommodate the preferences and/or needs of the reviewers and NCI staff. If a consensus date cannot be identified within the available window of time for the review, the review may be conducted in the absence of the applicant group or the application could be deferred to a later review cycle.

The duration of the on-site interview depends upon the nature of the application and is discussed with the principal investigator, the review group chairperson, and NCI staff. Site visits are limited to one day of presentations unless more time is strongly justified. Typically, 15 to 20 minutes are devoted to the presentation of each research project and an equal or greater amount of time is reserved for reviewers' questions. The final decisions on the duration and agenda of the site visit are the responsibility of the review SRA and the Research Programs Review Branch.

For amended applications (as defined in Section VIII), the specific review format depends on the extent and nature of the amendments made to the application. The SRA will determine the mode of review after careful examination of the application and consultation with NCI program staff and members of the NCI SRG, if applicable. A similar process will be used for determining the mode of review for supplemental applications. Amended applications, as a standard procedure, are reviewed using a telephone conference format. The applicant group may be afforded some time during

the telephone conference to answer questions from the review panel members. However, time is not set aside for presentation of extensive amounts of new data or specific aims.

It may be more appropriate, particularly if there is extensive amendment of the application including new projects or replacement of the majority of specific aims, for the principal investigator and members of the applicant group to make presentations to the review panel at a location other than the sponsoring institution. Such "applicant interviews" or "reverse site visits" are often held in the Washington, D.C. area and usually involve fewer and shorter presentations than regular site visits. The applicant group bears their costs of travel, lodging and meals, and visual aids.

NCI review panel meetings include an introductory orientation and planning session conducted by the SRA to discuss administrative and logistic matters relating to the review and to identify any additional information that should be requested from the applicant. During the review meeting, the review panel may meet in executive session to make sure the review objectives are being accomplished. The final discussions and scoring take place in executive session.

For those reviews conducted as an NCI SRG activity (work group/review panel), the reviewers' comments are assembled into a Draft Review Report. These reports are forwarded to the NCI SRG for use in final discussion and assignment of overall merit priority score. The reports and discussions of the NCI SRG are summarized in the final Summary Statement. If the review is conducted as a SEP, the reviewers' comments directly constitute the summary statement.

E. Communications with the Principal Investigator

The SRA contacts the principal investigator concerning potential timetables for review, background information relevant to the application, names of investigators in collaboration with the members of the applicant group, names of investigators who may be in conflict with the group, and the number of collated copies of appendix materials required for the review. The SRA provides an address and timetable for sending the requested information.

If additional significant findings are obtained in the interval between submission and review of the application, the principal investigator should contact the SRA for advice about submitting such findings for review. To allow sufficient time for adequate peer review, this information is not accepted later than four weeks prior to the review meeting, except in unusual circumstances. Major changes in scope or documentation that cannot be readily assimilated in the review process may result in deferral of review.

F. Communications with NCI Staff

Shortly after receipt of the application, the SRA contacts appropriate NCI program staff and other individuals for supplemental information and recommendations for prospective reviewers where appropriate. Program and/or grants management staff discuss with the SRA any unusual features of the application which might require additional material for reviewers, or any special problems that they anticipate in the review of the application. All review-related communications with actual or potential reviewers are through the SRA.

G. Selection of Reviewers

The size and composition of each SRG work group (or SEP review panel) are determined by the particular details of the application to be reviewed. It is the responsibility of the SRA to make these determinations based upon thorough review of the application and suggestions from program staff.

In identifying prospective qualified reviewers, the SRA takes full advantage of the many resources available, including existing name files of experienced reviewers, lists of grantees and contractors, computerized databases, and consultation with program and review staff and recognized authorities in the scientific community. The SRA, as well as program staff, will identify reviewers who, because of collaboration, affiliation, or bias, should be excluded from the review panel. It is inappropriate for applicants to suggest names of prospective reviewers. However, it is important for the applicant to identify collaborators on research other than that proposed in the P01 application. Applicants may also suggest expertise areas appropriate for inclusion in the review panel.

The chairperson of the review panel is a senior investigator experienced in the review of complex multidisciplinary applications and is generally knowledgeable in the scientific areas to be reviewed. The review panel membership reflects a balance in terms of experience, expertise, and specialty so as to afford peer review of the separate components as well as the overall P01. A consultant experienced in management and fiscal administration may be needed when large P01s are reviewed. In most cases, this consultant does not vote on the scientific merit of the components or assign a priority score for the application, but does express opinion of the overall program administration. For relevant applications, patient advocate/consumers will be included in the review group. These individuals, who have full scoring privileges, will speak to the importance of the research to the patient community and comment on human subjects issues.

The SRA may contact the principal investigator to discuss the specific disciplines or specialty areas of expertise which the principal investigator feels are required to review the application properly. However, as noted above, names of potential reviewers are <u>not</u> to be directly or indirectly solicited from the principal investigator.

A limited name list of individuals who, in the opinion of the principal investigator, may not be able to give an unbiased review is always requested. Full consideration is given to valid reasons presented by the principal investigator requesting that a particular reviewer not be invited, but the final decision rests with the SRA responsible for the review. The principal investigator should discuss these issues fully with co-investigators before communicating this information to the SRA.

When the arrangements for the review are completed, the SRA advises the principal investigator and program director in writing of the details, including the roster of the SEP or site visit team.

H. <u>Scientific Review Group (SRG) Procedures</u>

The NCI Scientific Review Groups (SRGs) assess the overall merit of P01 applications that have been submitted for consideration by the National Cancer Advisory Board (NCAB) in a given review cycle. These applications have first undergone review for scientific merit of their individual components and program integration by a work group/review panel of experts in the specific scientific discipline. Representatives from the SRG participate in this initial phase of application evaluation to provide guidance to work group members relative to standards of review and general program merit. The primary role of the SRG is to provide a global

perspective on overall P01 quality, and to assign an overall merit priority score to the application. With the exception of SEPs (see below), work groups/review panels do not assign overall merit priority scores.
In scoring P01 components, each reviewer assigns a two-digit numerical score for projects having significant and substantial merit; cores are rated as Satisfactory or Superior. Plans to include women, minorities, and children are part of the merit assessment for all research which uses human subjects. Reviewers may vote a project or core as Not Recommended for Further Consideration (NRFC) should the proposed research or function not have significant and substantial merit, or when serious human subject, animal welfare, or other concerns are identified.
After assigning a merit score, reviewers critically examine the requested budget for each component and recommend a budget and research duration appropriate for the activities. The "Program as an Integrated Effort" is discussed and a merit rating is assigned. This element is rated as Highly Integrated, Integrated or Not Integrated. The strengths and weaknesses of the program relative to global significance, general research approach, innovation, investigator qualifications, environment, and potential scientific impact are then discussed. Program leadership, including administrative ability and qualifications of the principal investigator and adequacy of commitment to the P01, is also assessed. Finally, the work group discusses and makes a recommendation for duration of the overall P01.

For those reviews conducted as an NCI SRG activity, the reviewers' comments are assembled into a Draft Review Report. These reports are forwarded to the NCI SRG for use in final discussion and assignment of overall merit priority score. At the SRG meeting, reporters (individuals who participated in the initial scientific review) present the outcome of the initial review in a balanced and impartial manner. Discussion is focused on evaluating the overall P01 in terms of the specific criteria provided in these Guidelines (see Section IV). In addition, particular attention is given to considering the value added in conducting the proposed research in the context of a P01, as well as the potential scientific impact of the program. For those applications that contain translational and clinical components, the potential impact on the standard of patient care is also discussed.

Reviewers will focus on the meritorious projects and cores of the program (excluding any NRFC components) in assigning a merit priority score. Components of the P01 that are not recommended for further consideration will not be considered in the scientific evaluation of the overall program. Nevertheless, inclusion of components which are of poor quality or are unrelated to the P01 will be considered as evidence of a deficiency in judgment on the part of the the principal investigator and program administration. **It should be noted that reviewers do not have the option of selecting only the better components of the program in order to improve the overall score**.

Following discussion of the application, SRG members (both permanent as well as temporary) privately assign a merit priority score to the application. The merit priority score, along with the findings and recommendations of the initial work group, are incorporated into a written report which accurately conveys the evaluation of the P01. This summary statement is transmitted to the NCAB for advisory review, to the NCI official file and to the appropriate NCI staff. NCI program staff will automatically send a copy to the principal investigator as soon as the final document is available.

3. Special Emphasis Panel (SEP) Procedures

There are instances in which it may not be appropriate for the SRG to review a P01 application. For example, this is the case when the principal investigator, project

leaders, or core directors are permanent members of the SRG to which the application would normally be assigned. Under these circumstances, the review is conducted by a Special Emphasis Panel (SEP) that performs all the functions associated with the initial work group (i.e., assess the merit of the individual components) and the SRG (i.e., assign an overall merit priority score). For those reviews conducted as a SEP, the reviewers' comments directly constitute the summary statement.

XII. SUMMARY STATEMENT

The findings and recommendations of the reviewers are summarized in a written report which accurately conveys the evaluation of the P01. This summary statement is transmitted to the NCAB for advisory review, to the NCI official file and to the appropriate NCI staff. NCI program staff will automatically send a copy to the principal investigator as soon as the final document is available.

XIII. AWARD

Following review by the NCAB, scored applications are considered for funding by NCI program staff and the NCI Executive Committee. When an award is made, it is the policy of NCI that meritorious projects reviewed as part of the P01 be funded as part of the P01 even though other funding may be available. Under no circumstances is duplicate funding awarded.

NCI program staff may administratively delete funding or reduce the duration of support for components of P01s that are judged by peer review to be less meritorious and/or non-essential to the conduct of the P01.

The award and administration of P01s are subject to the same policies and procedures as other research grants. These policies and cost principles are set forth in the current PHS Grants Policy Statement, other NIH and NCI issuances and Federal legislation and regulations.

Questions related to NCI P01 review may be directed to:

Virginia P. Wray, Ph.D.
Deputy Branch Chief
Research Programs Review Branch
Division of Extramural Activities
National Cancer Institute
6116 Executive Boulevard, Room 8125, MSC 8328
Bethesda, MD 20892-8328
Rockville, MD 20852 (Express Mail)
Telephone: (301) 496-9236
FAX: (301) 496-6497
E-mail: vw8z@nih.gov

APPENDIX A: SAMPLE TABLE OF CONTENTS

SECTION I

Face Page
Description, Performance Sites, and Personnel
Table of Contents
Detailed Summary Budget for Program Project Initial Budget Period
Budget for Entire Proposed Program Project Period Direct Costs Only
Biographical Sketches

SECTION II

Overall Program Project
- Goals
- Theme of the Program Project
- Research Plan
- Progress Report/Preliminary Studies
- Institutional Environment and Resources
- Organization and Administrative Structure
- Literature Cited with complete titles and authors

Individual Research Project 1
- Title Page (Title, Project Leader, Degree)
- Description of Research Plan, Performance Sites, and Key Personnel
- Detailed Budget for First 12-Month Period
- Budget Estimate for Each Year of Requested Support
- Resources and Environment
  - Detailed Budget for First 12-Month Period for Consortium/Subcontract Arrangement
  - Budget Estimate for Each Year of Requested Support for Consortium/Subcontract Arrangement
- Resources and Environment for Consortium/Subcontract Arrangement
- Research Plan
  - A. Specific Aims
  - B. Background and Significance
  - C. Preliminary Studies/Progress Report
  - D. Research Design and Methods
  - E. Human Subjects
    - Protection of Human Subjects
    - Inclusion of Women
    - Inclusion of Minorities
    - Inclusion of Children
    - Data and Safety Monitoring Plan
  - F. Vertebrate Animals
  - G. Literature Cited
  - H. Consortium/Contractural Arrangements
  - I. Consultants/Collaborators

Core Component A
- Title Page (Title, Core Director, Degree)
- Description of Core Service Plan/Key Personnel
- Budget for the First 12-Month Period
- Budget Estimate for Each Year of Requested Support
- Core Services Plan
  - A. Specific Aims
  - B. Background and Significance
  - C. Progress Report/Summary of Services in Current Funding Period

D. Methods and Services to be provided
E. Human Subjects
Protection of Human Subjects
Inclusion of Women
Inclusion of Minorities
Inclusion of Children
Data and Safety Monitoring Plan
F. Vertebrate Animals
G. Literature Cited
H. Consortium/Contractural Arrangements
I. Consultants/Collaborators

Checklist

APPENDIX B

SAMPLE TABLE OF DISTRIBUTION OF PROFESSIONAL EFFORT (%) ON THIS APPLICATION

Participating Investigator	Project 1	Project 2	Project 3	Project 4	Core A	Core B	Core C	Application Total
Dr. A. (Principal Investigator)	20*		15		15*			50
Dr. B.						10*		10
Dr. C.		25*	10				20*	55
Dr. D.				30*				30
Dr. E.	30		30*					60
Dr. F.						30		30
Dr. G.		25					25	50
Dr. H.							25	25
Dr. I.				50				50

*Project Leader/Core Director

First lines should be reserved for project and core directors; other investigators should follow thereafter.

APPENDIX C

SAMPLE TABLE OF PERCENTAGE DISTRIBUTION OF SCIENTIFIC CORE RESEARCH RESOURCES TO PROJECTS

Project	Project 1	Project 2	Project 3	Project 4	Project 5	Total (100%)
Core A: Bioinformatics	20		40	40		100
Core B: Animal Maintenance	50			50		100
Core C: Administration		30	40		30	100